

REMARKS

Claims 1, 4, 7-17, 19-23, 236, 29, 32-39, 41-44 and 56-74 are currently pending in the subject application, and are presently under consideration. Claims 1, 4, 7-17, 19-23, 26, 29, 32-39, 41-44 and 56-74 are rejected. Claims 65 and 66 have been amended to correct typographical errors and to place these claims in better condition for allowance or appeal. No new matter is being added.

Favorable reconsideration of the application is requested in view of the amendments and comments herein.

I. Claim Objections

Claims 74-75 have been renumbered as claims 73-74 as suggested in the Final Office Action dated February 9, 2009. The following comments will address claims as renumbered in this Response.

II. Response to Arguments

Before addressing the Claim Rejections section of the Final Office Action, this response addresses issues raised in the Response to Arguments section of the Final Office Action at pages 2-4. This section seems to suggest that all arguments presented by Applicant with respect to claims 1, 4, 7-17, 19-23, 26-39, 41-44 and 56-74; however, it is clear that many arguments presented in the Response to Arguments section of Final Office Action may apply to only some claims or seem to characterize claims using language that is not currently present in the application.

In its Response, the Examiner specifically states that the Remote Video Session Manager 'RSM' 106 or 616 corresponds to the multimodulator. Final Office Action, page 3, lines 5-6. However, immediately after asserting this position, the Examiner relies on the Information Server 102 to support its rejection. See Final Office Action, page 3, beginning at line 8, in which specific functions of the Information Server 102 are characterized by the Examiner an attempt to read on the claims. Insofar, as this assertion applies to at least claims 23 and 59 (and their dependent claims), the Examiner's position is inconsistent to the point of being contradictory since the Information Server 102 is admittedly not part of the video session manager 106 or

remote video session manager 606. Moreover, all the functionality relating to packetization of the streams, specifically including the subscriber terminal ID and the PIDs in the cited sections of Dyer (col. 4, lines 12-26 and lines 31-59; Col. 6, line 37-col. 7, line 29, lines 48+), are provided by the Information Server 102. Therefore, to the extent that the Examiner's position is meant to apply to independent claims 23 and 59, such position is without merit. Specifically, claim 23 is directed to a plurality of multimodulators and claim 59 is directed to a multimodulator. Thus, the reliance on the information server 102 taught by Dyer against these claims and claims depending therefrom is improper as being contrary to the position asserted in the Final Office Action, and as it being unpredictable for one of ordinary skill in the art to combine the Information Server 102 with the remote video session manager 106 or 606 to provide a multimodulator as is being claimed based on the teachings of Dyer.

Additionally, the description in Dyer of the optional packetizer 206 as part of the video session manager 106 (Final Office Action, citing Dyer, col. 8, lines 27-67) further fails to disclose any determination that is performed for controlling unicast or multicast transmission as well as is silent with respect to any appending of a data unit header consistent with what is recited in any pending claims 1, 4, 7-17, 19-23, 26-39, 41-44 and 56-74.

Significantly, the Examiner erroneously states that the "Information Server 102/RSM-106 'IS/RSM' 102/106) [sic] determines from a table whether a given packet is multicast packet or a unicast packet..." Final Office Action, page 3, lines 8-9. However, Applicant's representative has read and even performed a keyword search in the text of Dyer and submits that such a contention is completely unsupported by Dyer. Dyer fails to disclose any use of a table as is being alleged in the Office Action. Regardless of how the Information Server might add the PIDs and the TIDs to its streams, such functions are not performed by the RSM 106 or 606, which the Office contends corresponds to the multimodulator being claimed.

Additionally, the Final Office Action contends that the "IS/RSM 102/106 appends a data unit header to each packet including the modulator identifier identifying one or more modulators from which the packet is to be transmitted..." Final Office Action, page 3, lines 13-16. However, no citation to any teaching in Dyer (or any other reference) is provided in the Final Office Action to support this contention. In the absence of any citation, it must be presumed and Applicant submits that no teaching in Dyer can support such a position. Even if the Examiner

meant to cite the same sections of Dyer to support this position (i.e., the same sections as it cites to support each of the other positions, namely, Dyer, col. 4, lines 12-26 and lines 31-59; Col. 6, line 37-col. 7, line 29, lines 48+), such a contention would fail. As explained in Applicant's prior Response, even if the optional packetizer 206 were included in the modulator 208, such packetizing is disclosed for packetizing the information according to a transport protocol. Dyer, Col. 8, lines 44-53. Regardless how packetization occurs, Dyer is silent as to any appending or stripping of a data unit header, and providing packets to unicast and multicast buffers, as recited in claim 1. Instead, the PIDs and the TIDs remain in the output signals that are transmitted to subscriber terminals. See Dyer at Col. 6, lines 45-61.

In its rejection at page 3, lines 20-22, the Final Office Action further seems to be inconsistent in both its characterization of Dyer and in identifying what is being claimed by alleging the "IS/RSM 102/106 further provides each packet and copied packet to one of a multicast or unicast buffer in accordance with the data unit header." First, the only mention of buffering in Dyer (and there is only one!) occurs at Col. 13, line 33. This singular mention of buffering relates to buffering at the subscriber terminal, and not with respect to any buffering that could be performed at the Information Server 102 or at the Remote Video Session Manager 106, 606. Again, the failure of Dyer to mention any buffers that are arranged and configured to operate in the manner recited in the present application demonstrates fundamental differences in what is being taught in Dyer relative to what is being claimed in the present application. The lack of details relating to narrowcast and broadcast and pointcast reveals a lack of emphasis on the techniques being implemented in Dyer.

The mention of processing and copying in the Final Office Action at page 3, lines 17 and 18, respectively, appears to be left in the Action from a prior rejection demonstrating a lack of consideration being given to what is actually claimed. Applicant's previous Amendment and Response removed the processing from claim 1 and modified how a multicast packet is copied.

At page 4, lines 8-12, the Final Office Action contends that Du is in the same field of endeavor as Dyer. Such a position as the sole basis to combine teachings from Du with Dyer demonstrates that the obviousness position is not based on the teachings of the respective references due to the substantially different function and context of the buffers in Du relative to the approach in Dyer. Du relate to a wireless local area network that employs radio devices (i.e.,

wireless transmitter) to exchange ATM cells between different radio devices. The particular reliance in Du at Col. 11, lines 19-22, would not provide any suggestion or motivation to one skilled in the art to modify Dyer as the Examiner is suggesting. Significantly, buffers 73 disclosed in Du are included in a LLC (Logical Link Control) circuit that forms part of a wireless radio device. Du, Fig. 7 and Col. 10, lines 55-64. The LLC circuit includes a plurality of $n+1$ buffers 73 that are used for a connection to a different wireless terminal in the network based on an evaluation of the ATM cell performed by an evaluation circuit 72. Du, Col. 10, line 64, through Col. 11, line 11. Since the radio device in Du is a wireless device, the cell remains in the buffer until reception of the cell has been acknowledged or a dwell time is exceeded. Du, col. 11, lines 46-61. Despite the buffering of ATM cells for multicast connections, the buffers feed to a single RF transmitter that employs the LLC circuit (Fig. 7) to place each of the buffered ATM cells into respective slots for TDMA transmission to one or more other terminals. See Du Col. 11, lines 11-62 and Abstract. Such an arrangement of buffers would be operative in the approach taught by Dyer, which relates to an interactive cable distribution system having multiple DVMs 203. Because of the differences between the respective teachings of Dyer and Du, a skilled artisan would not have the knowledge or ability to combine the buffering from Du into the system of Dyer. There is no evidence in the Office Action that the copying of a cell for multicast connections, as taught by Du would retain its function in Dyer since the different network topologies and transmission media (wired versus wireless). Consequently, the skilled artisan would not deem the results suggested in the Final Office Action predictable due at least in part to the different technologies and purposes that are disclosed in each of the patents.

Another apparent discrepancy between what is claimed and the rejection in the Final Office Action relates to a reference to "a claimed step of 'providing each modulator identified by the modulator identifier with a copy of the given packet, where each copy has a common PID value associated therewith.'" Final Office Action, page 4, lines 12-14. The step that the Final Office Action describes does not exist in any of the pending claims. Reference back to the originally filed application demonstrates that the Examiner seems to be referring to originally filed dependent claim 3. Applicant had amended the claims in its Amendment dated November 11, 2008, and respectfully requests that these claims should be examined on their merits.

For these reasons Applicant respectfully requests that the rejections of claims 1, 4, 7-17,

19-23, 26-39, 41-44 and 56-74 be withdrawn.

III. Rejection of Claims 1, 4, 7-17, 19-23, 26-39, 41-44 and 56-74 under 35 U.S.C. 103(a)

Claims 1, 4, 7-17, 19-23, 26-39, 41-44 and 56-74 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,305,019 to Dyer et al (hereinafter, "Dyer") in view of U.S. Patent No. 6,088,346 to Du, et al. (hereinafter, "Du").

The grounds for rejecting claims 1, 4, 7-17, 19-23, 26-39, and 41-44 are very similar to those set forth in the previous Office Action. Applicant maintains that the rejection of these claims is not proper for the reasons set forth in its Amendment and Response dated November 11, 2008, for the reasons discussed above in Section II of this Response as well as for the following reasons.

As discussed above, in contrast to the position at page 6, lines 1-4, of the Final Office Action, Dyer does not disclose any data unit header that is appended to each packet. Instead, the only identifiers disclosed in Dyer amongst Col. 4, lines 12-26 and lines 31-59; Col. 6, line 37-col. 7, line 29, lines 48+ col. 8, lines 27-67, relate to unique program identification number (PID) and a subscriber terminal ID, which are transmitted onto the cable network and the subscriber terminal retrieves all the packets addressed to its TID. See specifically, Dyer at Col. 6, lines 45-61. Moreover, since the subscriber retrieves packets addressed to its TID and the streams carry the PID for the requested program, it is clear that the video session manager 106 does not strip any of the PID or TIDs consistent with what is recited in claim 1. For instance, if either of the PID or TID were stripped as is being suggested, a subscriber terminal would not be able to retrieve the streams it requested for a respective program.

Moreover, the cited sections of Dyer (*i.e.*, Col. 4, lines 12-26 and lines 31-59; Col. 6, line 37-col. 7, line 29, lines 48+ col. 8, lines 27-67) fail to support the position that at least some of the appending, providing, determining and stripping is performed by the video session manager 106 or the Remote Video Session Manager 606. See Final Office Action at page 6, lines 14-16. As discussed above, the only appending disclosed in Dyer as being performed by the Information Server. Col. 6, lines 51-57. There are no buffers disclosed in Dyer, such that neither the video session manager 106 nor the Remote Video Session Manager 606 provides any packets to a multicast buffer or a unicast buffer. Since Dyer discloses no table in either of the video session manager 106 or the Remote Video Session Manager 606, it consequently cannot determine if the

packet is a unicast or multicast packet from a table as is asserted in the Final Office Action at page 5, lines 19-21.

Several reasons why Du fails to cure the deficiencies of Dyer are discussed above in Section II of this Response. In addition to there not being proper motivation to combine Du with Dyer, even if such references were combined, which Applicant maintains would be improper, one of ordinary skill in the art would not deem the method of claim 1 to be predictable based on the combined teachings.

Significantly, Du teaches routing wireless signals around a network in an asynchronous transfer mode within a ring. In this manner, intervening devices buffer incoming signals and, based on clock signals, transmit the signals to the next device through a single radio transmitter. This contradicts Dyer's parallel processing system (col. 7, lines 33-37) that is capable of providing a plurality of program streams at one time via different DVMs (Fig. 6). Consequently, there would be no reasonable expectation of success to combine the copying used in Du's asynchronous (or serial) processing system into Dyer's parallel processing system to implement to provide the method of claim 1. Any position to the contrary would be based on improper hindsight in which the present application is used as guide to modify Dyer and Du beyond any reasonable insight from these references.

For these reasons and the reasons discussed above in Section II of this Response, Dyer in view of Du fails to teach or suggest to a skilled artisan the combination of structural and functional features recited in claim 1. Since the Office Action provides no other evidence or legal reasoning sufficient to support its obviousness position, claim 1 is not obvious. Therefore, allowance of claim 1 is respectfully requested.

Regarding claim 4, Dyer actually teaches away from encrypting. In sharp contrast to claim 4, Dyer discloses a security system that does not involve encryption. Dyer, at Col. 3, lines 13-18. Dyer implements security by using randomly assigned PIDs that are uniquely assigned and by changing a subscriber TID. Accordingly, the obviousness position in the Final Office Action at page 7, lines 16-19, is without merit due to the substantially different approach employed in Dyer to provide security, which is implemented for reducing costs associated with transmission and presentation of programs. Dyer, Col. 3, lines 13-16.

Regarding claim 7, the Final Office Action cites to Dyer at Col. 9, line 26-col. 10, line 25

and line 54+ but admits that Dyer fails to teach unicast buffer and multicast buffers. To support its rejection the Examiner states that the deficiency "is met as previously discussed with respect to the rejection of claim 6." Final Office Action, at page 8, lines 1-5. Ironically, claim 6 was cancelled in Applicant's response dated February 19, 2008. If the Examiner is referring back to the Office Action back in November 20, 2007, where it relied on Du for a purported teaching of a buffer for unicast packets and a buffer for multicast packets, it is reiterated that Du teaches that each of the buffers 73 is associated with a respective one of the network terminals. That is, the radio device 33 includes a single buffer 73 assigned for sending an ATM cell to each terminal, regardless of whether the cell is to be a unicast or a multicast connection.

Moreover, as explained above, nowhere in the cited sections of Dyer is there a disclosure of any buffer other than with respect to the subscriber terminal. In contrast to any disclosure in Dyer, claim 7 recites that an output buffer is associated with each of the modulators, which makes explicitly differentiation between the output buffer for each modulator relative to the unicast and multicast buffers introduced in claim 1. Such a concept is not taught or suggested in Dyer or Du, taken in individually or in combination. In the absence of withdrawing the rejection of claim 7, the Examiner is requested to identify with specificity where in the cited section of Dyer or elsewhere in Dyer the claimed interrelationship between output buffers, unicast buffers and a multicast buffer exists. In the absence of identifying a specific disclosure or providing other evidence to support its obviousness position, it should be presumed that the obvious position is deficient. Claims 8-13 depend from claim 7 and should be allowed for similar reasons.

Additionally, claim 9 further recites additional features associated with how the method determines whether to check one of the unicast buffers or multicast buffer. This additional functionality is not taught or suggested in Dyer. In contrast to the suggestion in the Final Office Action, each of the buffers 73 taught in Du is associated with each assigned terminal, and no distinction is made as to which buffers 73 may be unicast buffers or multicast buffers. Du, Col. 11, lines 2-11. Instead, Du explicitly teaches that a multicast connection is copied to the buffers in accordance with the number of connections defined by the multicast connection and as the cells are read from the buffers 73 they are further buffered in a latch 74 for transmission from the radio device. Du, Col. 11, lines 39-49. This is at least in part due to the radio device 49 in which

the buffers 73 are implemented in Du include a single radio transmitter, in contrast to the interactive cable network of Dyer. That is, the buffers in Du would not retain their function if implemented in the system of Dyer as is being suggested. Accordingly, the addition of Du fails to make up for the admitted deficiencies of Dyer (See Office Action, last paragraph at page 8).

Claims 10-13 depend from claim 9 and provide additional features relating to the method of claim 9, which combination of features are not taught or suggested in the combination of Dyer and Du.

Claims 17 and 19-22 refine the method of claim 1 where a second transport stream is received at the multimodulator. Similar to as discussed above with respect to claim 1, a careful analysis of the various sections of Dyer cited in the Office Action demonstrates that the evidence being relied on to support the obviousness position is insufficient since it does not establish several facts being asserted. Additionally, no other evidence or rational underpinning has been presented in the Office Action that is sufficient to support the legal conclusion of obviousness of these claims.

For the reasons discussed above, reconsideration and allowance of claims 1, 4, 7-17, 19-22 are respectfully requested.

Claim 23 recites a digital network that includes a plurality of multimodulators, each of which multimodulator comprises a particular structural and functional set of features. As discussed above in Section II of this response, the Office Action has taken the position that the video session manager 106 or remote video session manager 606 corresponds to the multimodulator. See Office Action at page 3, lines 9-10, and page 5, lines 18-19. A position to the contrary would demonstrate far greater deficiencies in the Office Action since each modulator in claim 23 includes an input port that receives at least one transport stream. Dyer clearly discloses and the Office Action agrees that such stream is provided by the Information Server 102 as it provides the streams and packets to the video session manager 106 or remote video session manager 606. Dyer at col. 4, lines 39-45. Moreover, all the functionality relating to packetization of the streams, specifically including the subscriber terminal ID and the PIDs in the various cited sections of Dyer (col. 4, lines 12-26 and lines 31-59; Col. 6, line 37-col. 7, line 29, lines 48+) are provided by the Information Server 102. Thus, claim 23 is patentable for these reasons and for reasons similar to those explained above with respect to claim 1.

Dependent claims 26, 29, 32-39 and 41-44 are patentable for similar reasons to claim 23 from which they depend and for the additional features recited in such claims as discussed herein.

Reconsideration and allowance of claims 23, 26, 29, 32-39 and 41-44 are respectfully requested.

Regarding claim 59, the Office Action relies solely on its rejection of claim 1 to reject this claim alleging it "is composed of the same structural elements that were discussed with respect to the rejection of claim 1." Office Action, page 13, lines 10-12. However, in contrast to the method of claim 1, recites structural elements for which there are not corresponding actions in the method of claim 1. For example, claim 59 recites that a packet handler retrieves a given data unit packet from one of the unicast buffer or the multicast buffer in response to a request for a data packet, and at least a payload portion of the retrieved packet is stored in an output buffer. That is, claim 59 recites an output buffer, which is in addition to the unicast and multicast buffers recited in claim 1. Thus, the rejection of claim 1 that is being applied to claim 59 does not establish a prima facie case of unpatentability with respect to claim 59. Accordingly, since the rejection of claim 59 fails to support the obviousness conclusion, withdrawal of the rejection of claim 59 and its dependent claims 60-74 is respectfully requested.

Claim 60 introduces a packet requestor that operates in conjunction with an output buffer that was introduced in claim 59. The Office Action cites a set of citations that fail to disclose or even suggest to a skilled artisan the features that are being claimed. For instance, Dyer does not disclose the output buffer (introduced and discussed with respect to claim 59). Consequently, Dyer cannot disclose a packet requestor that places at least a payload portion of the retrieved data unit packet in such output buffer. Significantly, base claim 59 also recites a packet handler that retrieves a data unit packet from either a unicast buffer(s) or a multicast buffer, further differentiating the output buffer from the unicast and multicast buffers.

Claim 61 depends from claim 60. Thus, in addition to the reasons discussed above with respect to claims 59 and 60, claim 61 further recites particular functionality and interrelationship of the packet requestor and buffers if the retrieved packet (retrieved by the packet handler) is a multicast packet. Such additional features are not disclosed in Dyer.

Claim 62 depends from claim 60. Thus, in addition to the reasons discussed above with respect to claims 59 and 60, claim 62 recites that the packet requestor performs stripping of the data unit header, which as explained above with respect to claim 1 is not disclosed in Dyer.

Claims 63-64 are patentable over Dyer for at least the reasons discussed above with respect to claim 59 from which they depend. Significantly, as discussed above with respect to claim 4, Dyer does not teach encryption but advances a way to transmit and present programs without encryption, thereby actually teaching away from what is being claimed.

Regarding claim 65, the Office Action cites to Dyer Col. 8, lines 27-67, Col. 9, line 26, through Col. 10, line 1+; and Col. 15, line 42-Col. 16, line 1+. However, Applicant has analyzed the cited sections and has performed a keyword search of the entire Dyer patent and cannot find even a single disclosure of a counter to support the position in the Office Action. In the absence of withdrawing the rejection of claim 65, the Examiner is requested to identify with specificity where in the cited section of Dyer or elsewhere in Dyer a disclosure of the claimed counter exist. In the absence of identifying a specific disclosure or providing other evidence to support its obviousness position, it should be presumed that the obvious position is deficient.

Claim 66 has been amended to correct an inadvertent oversight, which is readily apparent upon review of this claim, such that claim 66 depends from claim 65. The Office Action relies solely on its rejection of claim 1 to reject this claim. Office Action, page 14, line 8. However, in contrast to the method of claim 1, recites structural elements for which there are not corresponding actions in the method of claim 1. For example, claim 66 recites that use of a packet counter, which is introduced in claim 65. Since this feature and the particular arrangement of unicast and multicast buffers was not in claim 1, the rejection of claim 1, which is being applied to claim 66, does not establish a prima facie case of unpatentability with respect to claim 66.

Claims 67-74 depend from claim 59 and are patentable for at least these reasons and for the additional features recited therein.

For the reasons discussed above, reconsideration and allowance of claims 59-74 are respectfully requested.

IV. CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that the present application is in condition for allowance. Applicant respectfully requests reconsideration of this application and that the application be passed to issue.

Should the Examiner have any questions concerning this paper, the Examiner is invited and encouraged to contact Applicant's undersigned attorney at (216) 621-2234, Ext. 106.

No additional fees should be due for this response. In the event any fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees to Deposit Account No. 20-0090.

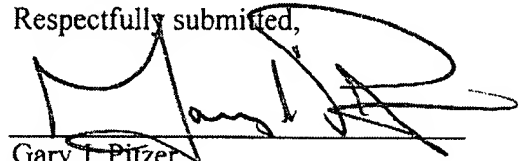
I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office via electronic filing on April 6, 2009.

SEND CORRESPONDENCE TO:

CUSTOMER NO.: 85811

TAROLLI, SUNDHEIM, COVELL & TUMMINO LLP
1300 East Ninth Street – Suite 1700
Cleveland, OH 44114
(216) 621-2234

Respectfully submitted,



Gary J. Pitzer
Registration No. 39,334

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